

What is claimed is:

1. A method of manufacturing a three-dimensional mounted assembly comprising the steps of:

5 disposing a plurality of electronic parts on a mold and providing a plurality of interconnections on the mold;

filling a cavity formed by the mold with a molding material, and sealing the electronic parts and the interconnection with the molding material; and

10 curing the molding material, and removing the mold from the molding material.

2. The method of manufacturing a three-dimensional mounted assembly as defined in claim 1,

15 wherein the mold has a structure in which the three-dimensional body having the cavity is developed on a plane.

3. The method of manufacturing a three-dimensional mounted assembly as defined in claim 1,

20 wherein each of the interconnections includes a wire, and both ends of the wire are bonded to the mold.

4. The method of manufacturing a three-dimensional mounted assembly as defined in claim 3,

25 wherein a bonding pad is formed on the mold in advance, and the wire is bonded to the bonding pad.

5. The method of manufacturing a three-dimensional mounted assembly as defined in claim 1,

wherein the electronic parts and the interconnections are sealed with the molding material with a release agent applied  
5 to the mold.

6. The method of manufacturing a three-dimensional mounted assembly as defined in claim 1,

wherein the mold has a projection, and a recess, at least  
10 part of which is formed by an exposed portion of each of the interconnections, is formed in the molding material by providing part of each of the interconnections on an upper end surface of the projection.

15 7. The method of manufacturing a three-dimensional mounted assembly as defined in claim 5,

wherein the mold has a projection, and a recess, at least part of which is formed by an exposed portion of each of the interconnections, is formed in the molding material by  
20 providing part of each of the interconnections on an upper end surface of the projection.

8. The method of manufacturing a three-dimensional mounted assembly as defined in claim 6, further comprising a  
25 step of filling the recess with a conductive material.

9. The method of manufacturing a three-dimensional

mounted assembly as defined in claim 7, further comprising a step of filling the recess with a conductive material.

10. The method of manufacturing a three-dimensional  
5 mounted assembly as defined in claim 1,

wherein at least one of the electronic parts is an optical device, and

wherein the optical device is mounted with an optical section thereof facing the mold, and the optical device is  
10 sealed with the molding material so as to avoid contact with the optical section.

*para 17*  
11. A three-dimensional mounted assembly comprising:  
15 a molded body;  
a plurality of electronic parts sealed with the molded body; and

a plurality of interconnections electrically connected to the electronic parts and sealed with the molded body,

wherein part of at least one of the interconnections is  
20 exposed on a first side of the molded body, and

wherein part of at least another one of the interconnections is exposed on a second side of the molded body differing from the first side.

25 12. The three-dimensional mounted assembly as defined in claim 11,

wherein the molded body is a rectangular parallelepiped,

Could be a 7

and

wherein the exposed portions of the interconnections are disposed on a plurality of the sides of the molded body.

---

5            13. The three-dimensional mounted assembly as defined in claim 11,

             wherein the molded body has a recess, at least part of which is formed by an exposed portion of each of the interconnections.

10           14. The three-dimensional mounted assembly as defined in claim 12,

             wherein the molded body has a recess, at least part of which is formed by an exposed portion of each of the  
15 interconnections.

             15. The three-dimensional mounted assembly as defined in claim 13,

20           wherein the recess is filled with a conductive material.

             16. The three-dimensional mounted assembly as defined in claim 14,

             wherein the recess is filled with a conductive material.

---

25           17. The three-dimensional mounted assembly as defined in claim 11,

             wherein each of the electronic parts is an optical device,

and a hole linking an optical section of the optical device is formed in the molded body.

18. The three-dimensional mounted assembly as defined in  
5 claim 17,

wherein an optical fiber is inserted into the hole to form an optical module.

19. An optical transmission device comprising:  
10 a plurality of the three-dimensional mounting assemblies as defined in claim 17; and

an optical fiber connected to each of the three-dimensional mounting assemblies.

20. The optical transmission device as defined in claim  
15 19, further comprising a plug electrically connected to each of the three-dimensional mounting assemblies.

Add a<sup>2</sup> >